I-RECOVERY KERNEL

Catharsis kanye noMkhakha Wokuvuthwa.

I-CHRYSALIS.

Ucwaningo Lwemvelo, Izinhlobo Zezilwane, kanye Nesayensi Yokuba.

Ngenkathi intuthu ibhola kuyo indlala, okwenzeka ngaphakathi kwendlala kufanele kube ukuguquka okumangalisayo. Indlala iyindawo lapho intuthu iguqula khona yaba yintukutana.

Ngenkathi intuthu ibhola kuyo indlala, amaselula ayo aqala ukuphila futhi asetshenziselwe ukwakha umzimba wentukutana. Lezi zindlela zokuguquka ziyahlanganiswa ngokuyisimbi futhi zithatha izinsuku eziningi noma amasonto ukuze ziqedwe.

Ngenkathi intuthu iguqula, idlala indima ebalulekile ekugcineni kwesimo sakho. Ukwazi ukuthi yini okwenzeka ngaphakathi kwendlala kungasetshenziselwa ukufunda ngezindlela eziningi zokuphila.

Uhlelo lwezincibilikazi le-caterpillar luhlanganisa izicubu zayo. Ama-enzayimbi okudla asula umzimba waba yintambo yezinto ezibukhoma. Kusondelelana kakhulu, cishe yonke into ilahlekelwa. Kuphela amabhulogi ambalwa amaseli athuleli—ama-imaginal discs—aphilile. Lezi disc zihlela le ntambo futhi zakha indlunkulu.

I-bhambatha akuyona inguqulo ethuthukisiwe yochobokeke. Yiluhlobo olunzulu olwenziwe ngamathambo ahlonyiswe. Futhi, inkumbulo—ukulwazi okuhlanganiselwe empilweni yochobokeke—iyahlala ngemuva kokuhlonyiswa.

Catharsis — Igama kanye nalokho okusho ngempela.

I-CENTURION - Kusuka ngesiGrekisi, "κάθαρσις" - Ukuhlanzwa. Ukukhululeka kwento eyabambekile isikhathi eside.

IKatharsis inemikhuba emibili eyahlangana kuyo incazelo eyodwa. U-Hippocrates ayisebenzisanga ngendlela yezokwelapha—ngokuhlanzwa okususela ukukhona kwezifo ezibangelwe yizinto ezingelulungile ezifakwe emzimbeni. UWAristotle ayisebenzisanga ngendlela yobuciko—ngokuhlanzwa kwesizungu kanye nokwesaba

okubangele ukuthi umdlalo omkhulu wamabhiliyoni udlule kubalandeli bakhe. Ubuhlobo phakathi kwalokhu: kokubili, ikatharsis kungalokho okwenzeka lapho into eyiwo, egcinwe, futhi ededele kakhulu ngaphakathi kwento ethile, ekhipha ekugcineni.

Umuntu okhululekile uyagxumela okuthile. Ubunzima bomphumela, welimalo, kanye nomuzwa ongokwehlukile owenziwa ukuhlanganiswa kwalezo zinto. Ukukhululeka akuyona ukulahlekelwa kulowo mzulu. Kuyikhululekisa—ukuguqula ubunzima obugxumekile into eyodlula ngaphakathi futhi ihamba ngendlela ehlukene kuleyo eyafika ngayo. Isivalo asishi, kodwa ingcindezi ngaphakathi kwalo yeshaywe.

Idrama laseGibhithe linikeze indawo ekuhlangenwezeni kwesikhathi esedlule: ithiyetha, indaba ehlangene, ubukeka bomphakathi, umkhuba owavumela ukuthi kukhona amemori emanzani ngaphandle kokulimaza lomuntu owayezizwa. Imvelo inikeza uhlobo oluhlukile lendawo. Isilwane esenza lokho okwaklanyelwe ukuthi asenze—ukuhlaziyeka, ukuqonda, ukubuyela, ukuvela—nikanisa umbukeli ngendlela yokubonakala kwalokho okwenzekayo ngaphakathi kwalo.

Yini okudingekile ukuze kube nokuhlaziswa?

Element	Emvelweni.	Ekuvikelweni.
I-kontena.	I-chrysalis. Umfula owawundlala yimfene. Igumbi elingaphansi komhlaba lapho intuthu ilalela khona. Isikhwama esithakaselwa umkhovu.	Isikhathi sokuphuthuma kokuqala. Uhlelo lwanoma yini ngosuku. Imvelo yemvelo ngokwayo - enkulu futhi inganakekelwa ukuba igcine izindaba zentukutheko nekhuphoni, ngaphandle kokuthi zigcwale.
Imvume.	Umhlaba wonjenge, akuxoxisani mayelana nokuhlazwa. Uhlelo lwezincibilikazi le-caterpillar alubuze ukuthi ukuhlazwa kufanele yini. Inqubo iqala lapho izimo zifanelelwe.	Imvume yokuzwa lokho okubekwe kude - ngokuphelele, ngaphandle kokulawula ngoba ukuthokozisa kwabanye, nangaphandle kokufuna into ekunciphisela umthwalo. Le mvume inikezwa kuphela yilowo muntu uqobo.
Umboni.	Umhlabathi obukeka ngobuchule – umuntu obona intuthu esikhula ngendlela efanele, engenzi izinto ezingafanele, futhi engagcwalisi okungabonakali. Umbukeli akalandeli. Umbukeli	Ingxenye yomuntu onganakile ukubona ukukhishwa kwemozili ngaphandle kokuba wonakele ngayo. Ukwazisa kombhali wezenkolo. Ingxenye ethi: "Lena ukuhlushwa, futhi ukuhlushwa kuyalungile

	ukhona futhi unokwazi.	lapha."
Ukuhlanganisa.	I-bhambatha ayikhumbuli ukuba yinkinga ukuba yayingobhambatha. Impovu eyashona endaweni yokuzala igubule ukuhamba kwabo—ukugcwaliswa kulo uhambo kubalulekile.	Incazelo efundiswa ngemva kokukhululelwa. Lolu hlobo lwemivuzo lubalulekile kangakanani? Izinhlobo zempilo ezichaziwe ngezansi ziyithuluzi lokuhlanganisa—zinikeza ulwazi isimo esikhulu kunomlando womuntu siqu.

Isigaba 2 — Isigaba Se-Pupal: Ubuhle Bokuhlazwa.

I-CENTURION - Inja Yayilapho Njalo, Ekhokhwa. Izicubu Zokuguquka Yayilapho Njalo.

Okwazi kwezesayensi ngemphenyo yobudlova eguqukayo (holometabolous metamorphosis) kunomlando oyinguqulo futhi omuhle kakhulu kunalokho okuyisibonelo esenziwe ngalo.

Uma intambo yivalwa futhi ukuguquka kuqala, uhlelo lwezincibilikazi luqala inqubo engokunye ingabizwa ngokuthi "ukuhlulelwa okukhulu kwezimo zombili." Ama-enzayimbi okudla afaka umzimba wonke. Izicubu zemisipha, amagugu emfundo, imininingwane emikhulu — kuhlaziywe kube yinto abahloli bayibiza ngokuthi 'isalu lomdali,' isixazululo esicebile sezakhamisa ezinani ezilandelayo eziqukethwe impahla yobungane engenziwa.

Okunokwazi: amadiski omfanekiso. Lezi yizixube zamaselula ezingahlukanisiwe ezikhona kukhakashi kusukela ekuqaleni — zinamandla afihliwe, zigcinwe, zilinde. Yile ndlela yokwakhiwa. Zihlale ziphilile yonke impilo yakhakashi ngaphandle kokusetshenziswa. Uhlelo lwenhlalakahle kukhakashi luhlasela konke futhi ngokukhethekile aluhlaseli amadiski omfanekiso.

Ezingozwini zempilini, amadiski okwakhiwa aqala ukusebenza. Lawa disiki ahlela izinto ezincibilisiwe ezungeze wona. Bakha amaphiko, amehlo ahlanganisiwe, uhlelo lokuphefumula oluhlukile, kanye nomlomo. Induku yenkukhu yakhiwa ngalokho intukutana eyayicibilisa.

Iqiniso lobulimi.	Yini okusho kanje?
Amadisiki ezokwakhiwa zikhona kukhakashi kusukela ekuqaleni. Azifike ngesikhathi sokuguquka. Zihlala ngaphakathi kukhakashi impilo yonke, zingathuthuki, zilinde izimo ezizovumela ukuthi zivele.	Umuntu ongaba ngaye wayisakaziwe kuye kusukela ekuqaleni. Akudalwe ukuziphatha, futhi akuhleliwe yikho. Ugcinwe. Izimo ezivumela lo muntu ubonakale—ukuphazamiseka kwezinto zakudala, nokutholakala kwemithombo entsha yokwakhela—yizingosi zokululama.
Imemori iyatholakala ngisho nakuba umzimba ubulahlwa. Izifundo ezithiywe ngezinyoni ezihlanganisiwe zibonise ukuthi izinyezi zigcina izimpendulo ezifundiswa njengezimbovane—ukubhaliwe kwememori kugcinwe ngokusetshenziswa kokuphazamiseka komzimba. Ulwazi olutholwe yisimbovane aluhlanjululwa. Kugcinwa futhi kudluliselwa.	Ulwazi olutholwe empilweni ngaphambi, ngesikhathi kanye nangesikhathi sokugula kungenziwa. Kuyinto esekelayo yokubuyisela ubuntu. Umuntu okhululekile akuyena owaqala kusukusuka ekuqaleni—uqala esimweni esithile esihlanganisiwe kodwa esigcina yonke into efundiswa ngempela. Ulwazi olutholwe ngenkani luhlala, ngisho nakuba umuntu ukhululekile.

I-chrysalis ayikwazi ukuvulwa ngaphandle. Inyosi etholakele ngaphambi kokugcina ukukhula ayihlali—ukuzabalaza kokuphuma kuyakha amandla engxenye yomzimba eyenza ukundiza kube nokwenzeka.	Inqubo yokululama ayikwazi ukufinyezelwa ngokusiza okungaphandle ngaphandle kokulahlekelwa amandla awo asezwile kule nqubo. Ubunzima akuyona inkinga kufanele ixazulwe. Yindlela yokuzivocavoca.

ISEKUSHINI 3 — IZIMILO ZEZINHLIZIYO.

Imininingwane eyishumi ekuguquleni.

Iziqwasha ezilandelayo ngamathuba afushane, hhayi ukubonakalisa okujwayelekile. Amafomu obungcweti bahlala alungile. Ukulinganisela nokululama kutholwe—kuwubunikazi bokuthi isilo yini kanye nalokho esizama ukukusombula. Funda lezi njengelibhuku lobuciko: unakekele ngokukhethekile ngempilo yangempela yesilwane, kulokho esilwandle senze ukuze zisize.

I. Iphupu yaseMonarch – Danaus plexippus

I-monarch ihamba imizwa engu-2,000–3,000 emayileni ukusuka eCanada uye ezindlwini ezithile zaseMexico - izindlela ezazishiye ngabagogo bayo enkosini enaminyaka edlule, okuthi ayikaze ziyivele. Ulwazi lwenkosi oludingekayo ukuze ithole leli hlathi elithile, lazi mithombo yanamu oyayelwa, kufakelwe engqondweni ye-monarch ngaphandle kokudluliselwa ngokusebenzisa inkumbulo yobuntu.

I-monarch ithatha izindlela zokuhamba ngamakhambi amaningi futhi ayenziwa ngesikhathi esifanayo: isikhundla selanga (lahlungiswa ngesikhathi sosuku usebenzisa i-clock yangaphakathi), umkhakha womhlabathini, kanye namaphethana kukhanyiselwe angabonakali amehlo abantu. Uma lezi zindlela zibonakala zingxabane, i-monarch ihlanganisa zonke futhi iyaqhubeka.

Okuningi okwenzekayo yiMonarch. *** Ukuhlanganisa ulwazi oluvela ezinsizakalweni eziningi.** *** Ukuqinisekisa ukuthi yonke iminye imisebenzi iyalandelwa kahle.** *** Ukuthola izindlela zokuthuthukisa izinto.** *** Ukusiza abantu bathole usizo abadinga.**	**Okuningi okufundiswa yi-Monarch.**
Iyahamba endaweni ayikaze yiyo—indlu eyikhulayo ngaphakathi kwayo kunokuthi ifunde ngomlando wayo. Isebenzisa izindlela eziningi zokuhamba ngesikhathi esisodwa. Uhambo luthatha isikhathi eside kunempilo yanoma yiliphi inkosi, futhi kuqedwa kuzizukulwane.	Ukuhamba phambili ekubuyeni akuhlali kulalelwa ngokuthi kungahlela kanjani ngesimo samanje. Kodwa into ethile ohlelweni iyazi ukuthi iya kuphi. Amadiski okudala ayeyazi ukuthi yini okumele yakhiwe ngaphambi kokuba ifayela liyivaleke.

	Izindlela eziningi zokuhamba ziyizinhlobo ezahlukene zokusiza etholakalayo: iphrothokholi yokuxhasa (ikhompasi yekhemikhali), uhlelo lwansuku zonke (ilokhisi yangaphakathi), ukucaciswa kwamagugu (umkhakha wesimboni). Uma kukhona ukuphazamiseka phakathi kwazo: hlanganisa futhi uqhubeke.

II. I-Dragonfly - iHlelo lama-Odonata.

Induku ihlala iminyaka eyodwa kuye kwengu-five—ngamanye izinhlobo kufinyelela ku-17—njengomkhakha ezindaweni zasendle ezilimele ehlwini elingaphansi lamadamu. Lo mkhakha uyisilo esiphelele futhi esiphumelelayo ngohlobo lwayo lwangaphambi kwamanzi: umdlavuza, onobumba, okwazi ukuhamba ngesivinini esikhulu. Xa ukuguquka kufika, uya phezulu kuthanga, uphuka engxenyeni yangaphandle yamanzi okokuqala, futhi ulinde amaphiko akhe athambe. Ngemuva kwalokho, uyagxumela empilweni yasendulo ekwazi ukuphunyuka ngasempandleni, ukuhlala endaweni efanayo, nokufinyelela kumphimbo we-30 mph.

Yini okwenza i-Dragonfly?	Yini okufundiswayo ngamathanga?
Idlala ingxenye enkulu yempilo yalo ngendlela efanele futhi esebenza kahle endaweni ethile. Isikhathi eside esiphansi kwamanzi akuyona ukulinda—kuyinto yokukhula. Ifomu elihlale emoyeni kudinga isikhathi esigcwele sesigaba senymph.	Isigaba somkhakha wokuphuthuma—isikhathi sokubalwa okugcwele, ukuhlela kwezezimali, ukuvuselela amakhono engqondo, uhlelo lwaso yonke ilanga—ngaleso sikhathi esakhe amandla omoya. Umuntu okhungathekile ngoba ukuphuthuma kuthatha isikhathi eside uyinkakha ekhuphuka uphahla ngaphambi kokuba amandla ayo omoya azilungiselele. Isigaba somkhakha akuyona impilo engalungile. Kudingekile.

III. I-Salmon — Oncorhynchus / Salmo

I-salmon yiselwa emfuleni omnene, iyodlula olwandle, iyokhula, bese ibuyela—iyahlanganisa ngomphumela wakho kuleyo ndawo eyayiseyelwe, okubhalwe engqondweni yayo yokukhanya—ngaphambili ngokumelana nomjuluko, iyagxuma emithunzini, futhi iyibekezele ukudla kwabanye izilwane. Labo abaqedela uku Buyela bayazala bese bashona. Amabhodibhodi e-salmon asePacific ayahlanganisa umhlaba ngaphansi komuthi onamandla eduze nomfula. I-nitrogen evela emibodini

ye-salmon eyayiseyelwe olwandle itholakala ezinkambeni zamathini amakhilomitha amaningi kude nalolu phondo. Ukufa kwe-salmon kuyindlela yokuthi umhlaba owawusekelwa ngayo ukukhula kwabantwana bayo athola izakhamuzi i-salmon eyayithole olwandle.

Ngingakwazi ukukusiza ngalokho.	Ngingathini i-salmon ingifundisa?
Ibuyela ekuqaleni hhayi ukuze kuqale kabusha, kodwa ukuze kugcwaliswe umjikelo. Lelela imithombo yelwandle - ukukhula okuhlanganisiwe - emuva endaweni yangaphakathi. Ukufa lapho kufike khona akuyona ingozi, kodwa ukuguqulelwa.	Ukubuyela emuva ekuhlelweni kokululama akusona ukubuya kwempilo engcono. Ukubuyela ekuqalweni—kumkhuba, emndenini, ezidinganisweni ezilokhu zikhona—kungumuntu othiwa ukuthi uthatha lokho olunikezwe yinhlanzi enkulu. Futhi okuthile kwasalmonihlathi liyahlala esihlahleni iminyaka eminingi. Ukubonakala kwezicubu kwempilo yenye yalokhu salmonihlathi lihlala ezintweni zesihlahla ngaphezu komfula lapho yafa khona.

IV. I-Cicada - Magicicada - i-cicada yanyanga.

I-cicada yezikhathi elandelayo ihlala ngaphansi komhlaba iminyaka engu-13 noma engu-17—ombili izinombolo ezinkulu. Ukuba le nomboro enkulu kunguyinkinga: akukho mbulaleli ovela minyaka engu-2, 3, 4, 5, 6, 7, 8, 9, 10, 11, noma engu-12 ongakwazi ukubheka noma ukuhambisana nokuvela okuyiminikhani engu-13 noma engu-17. I-cicada ixazulule ukulinyazwa ngobuchwepheshe. Uma ivela, izigidi zivela ndawonye—zidlulisa phansi yonke into yokulinyazwa ngenani elikhulu. Umdlandla uphila amasonto angu-4–6. Emva kwalokho, amagugu afakwa, izingane zifuna ukungena, futhi umkhathi weminikhi engu-17 ushintsha kabusha.

Impovu yenza ukukhala.	Cicada ifunda okuthile.
Lindela ngokusungulu ngezikhathi lapho ukuvela kungaba nokusindisa. Isikhathi esithile esihlala ngaphansi kakhuluma ngokuvikelwe okuthile, okunqunyiwe ngobubanzi. Ukufika akuhambi. Umsindo uma ufiwa uyakhulu kakhulu.	Isikhathi eside sokulula ngaphansi komhlaba—esibonakala kungenani kumhlabeni ngaphandle, iminyaka yokwakha ngaphandle kwento ebonakalayo—akuyona ukungathuthuki. Kuyindlela yokulungiselela eyisilinganiso esiyisimanga. Isikhathi sokuvuka kuzoqinisekiswa yihora yangaphakathi yomzimba, hhayi ngokulindeleka kwangaphandle. Uma ingxubevive ukukhala, ikhala kakhulu ukuze kulalwe ezimayilini eziningi.

V. I-crab yomhlambi wase-Hermit — Superfamily Paguroidea.

I-crab yasendle kufanele ithole, ihlaziye, futhi ingene ezindlwini ezishiywe—futhi ayishintshe ngesikhathi esithile njengoba ikhula, ngoba indlu eyayifanele ngonyaka odlule ngeke ifanele kulo nyanga. Uma indlu entsha iyatholakala, ama-crab asendle ahlela umugqa olandelana ngobukhulu. Lapho i-crab enye ingena endlweni entsha, indlu yayo esondelene iyatholakala kum-crab olandela, kuthweni lokushintshaniswa okwenzeka ngasikhathi sinye obizwa ngokuthi "umzila wokukhululeka." Indlu eyodwa etholakalayo iqala umzila wokusimamelana kuzo zonke izakhamuzi. Isikhathi sokushintsha indlu kubanga lokungunqubuzwe okugcwele: ingaphe, ithambo, futhi icishe.

Imfene yomkhonto.	I-crab yasendlini ifundisa okuthile?

Ngesikhathi esithile, ishaya uphinde ayishiye umdwebo ongasebenzi. Yamukela ukuba khona kokukhula. Ngenxa yalo mdlalo wokuguquka, ukukhula kwelinye kenza ukuthi kube nokutholakala kwezinye izinto eziningi.	Ubuchule obugcinele ukuba nokuziphatha okuyingozi – noma lobenzele ukuba kube nokuziphatha – buwumbhede. Kungaba lufane ngaphambilini. Ukushintsha kwalolu bhubede kuyisikhathi esiyingozi: phakathi kobuntu obuqedile kanye nalobusha, ukhazimulayo futhi uvulekile. Futhi lobu bhubede obishiye aluhambi. Buyatholakala kumunye umuntu odinga lokho okuyiphuzu olususiwe kuwe.

VI. I-Lotus - Nelumbo nucifera

ILoti yikhula ekudlulini elingapholi emaphuzwini—endaweni enomucu ophantsi kakhulu womoya, futhi egcwele amabhaktheriya. Ifa liyavela ngaphezu komhlaba, lithatha ukukhanya kwelanga, futhi lifinyeleleke. Indawo yaloti iyindawo engasetshenziswa yamanzi: ubunjini obuncane bemifino emincibilizi encane kubalwa ukuthi amamojula wamanzi angakwazi ukugeleza, okubangela ukwakheka kwamabhulogi ezintambo ezijikelezayo azophuma ngaphandle, zithatha noma yimuphi umthuli. Umthelela waloti usetshenziselwe ukukhiqiza izinto zokuhlanzwa ngokuzenzakalelayo ezenziwe ngamathalenta. Iloti ayikwazi ukugqwashwa kakhulu ngoba ukuhlamba kuyingxenye yomklamo, hhayi nje ukubukeka. Umthuli owayikhulisa akakwazi ukubambezeleka endaweni eyenziwe yiloti. Imbewu yaloti etholakala emthonjeni wamanzi wasendulo iqale ukukhiqiza ngemuva kweminyaka engama-1300. iminyaka.

Lokho i-Lotus eyenza.	Lokho i-Lotus efundisa.
Ikhula ngqo ezimeni zombutho ongcono kakhulu. Ayikwazi ukuhlazwa ngokungatholiki njengoba ukuhlanzekile kuyingxenye yobunjalo bayo. Igcina amandla okufana nezitini, ngisho nakwezimo ezibonakala sengathi zingayivumeli lokho.	ILoti ayikhuliswa ngaphandle komthombo, kodwa ikhuliswa emthonbeni. Ububanzi obuthile bomthombo wokululama—ingxenye efudumele kakhulu futhi emnyama yalo mbunguzo—kungalokho okukhiqiza ukucaciselela okuthile kokuvuka. Amandla okufana ayengahlali alahlekile. Wagcinwa ngeminyaka eyi-1300 yamazinga ebangelwa ukuthi angawuqeda.

VII. Impungushe — Corvus brachyrhynchos — Impungushe yaseMelika.

Impungushe isebenzisa futhi eyenza izinto. Igcina ukudla futhi iyibuya emavikini kamuva ngemininingwane mayelana nezindawo. Idlala—izimpungushe ezintsha zibonwe zisusebenzisana njalo ngokugwela phansi kumasipha agcwele utshani, hhayi ngenhloso yokufuna ukudla. Izimpungushe ziyakhumbula izikhathi eziyinyanga ngamaphasi ejwayelekile, ziqaphela labo abayenzakazisa futhi zifundisa izingane zalo zonke izindlela zokuphendula. Ziba yinto abafundi bayobuciko bayibiza ngokuthi "umhlangano wokugcwele"—amakhulu ahlangana ngaphezulu kwempungushe elithile, ezikhuluma, futhi ehlanganisa ulwazi oluxazululiwe mayelana nendawo. Izimpungushe zasendulo ezidlulisiwe njalo zibonwe ukuthi ziyashiyela izipho ezincane—izinkinobheni, ifoyili, izingcezu zemethali—lapho kukhishwa khona ukudla. Izinto. ngaphandle kokuba nomthelela omuhle kakhulu kumphungushe, kushiywe njengengxenye yobudlelwane.

Imbiza yentaba.	Impungu ifundisa yini?
Khumbula. Dlala. Khathazeka ndawonye futhi ufunde kulokho. Nikeza izipho ngaphandle kokucelwa. Phila ezweni lomphakathi olunomlando omuhle, ebusweni obucacile, kanye nezibophi zokuhambisana. Akukaze yaphela ukuba nekhono lokufunda.	Impungushe ulondoloza ukucwasa iminyaka - futhi kufundisa izingane zalo lokho. Lokhu kuyakhapha uma impungushe ikubona njengengozi. Kuyinto ehlukile uma impungushe ikubona njengengumngani. Isikhathi sokugqala kwempungushe siyokudluliselwa kolwazi. Ukuhlangana kwabantu abaningi ngesizathu sendlela yokulila kubeka ulwazi lokuzithuthukisa emphakathini. Ukukhathazeka okuhlanganisiwe kuyinto eyodwa nolwazi. Futhi izipho impungushe ishiya azona ezokunceda. Yindlela yokuphindaphinda - ukuziphatha kwendlovu enezingidingo zombudlelwano ezifezile futhi enento ayikhululekile ukuyinika.

VIII. Inyoka — Canis lupus

Impisi egxilwe kanye neyimpisi eyodwa zihluke kakhulu ngokuziphatha kwayo kancane kangangokuthi zingagcwaliswe njengezilwane ezihlukile. Impisi eyodwa ihlala inezingeni eziphezulu ze-cortisol, ukwehla kwezindlela zokudlala, impilo yomphakathi ephansi, amandla okuloba ahleliwe. Impisi egxilwe idlala, inomfihlo ezindaweni ezithile futhi enobunzima, iloba ngokubambisana ngendlela eyimpisi

eyodwa engayenza, futhi iyakhumbula abashonile. Isithombe esivamile sendlovukati "alpha" oqinile siwukuphelelwa yindlela yokufunda ezifundweni zempilako: umphakathi wemvelo ubambisana, unohlelo oluguquguqukayo, futhi uxhunyanwe kakhulu. 'Alpha' ngokuvamile iyimpango yomama nomfazi - abazali - futhi uhlelo lubalwa njenge... Isakhiwo lomndeni.

Ngingakwenza okuningi! Ngiyingxenye yohlelo olukhulu, futhi ngisiza ukuthi lusebenze kahle. Nginokwenza izinto eziningi, njengokuthola ulwazi, ukuphendula imibuzo, nokubhala izincwadi.	**Yini okufundiswa yi-Wolf?**
Impisi engaphakhiwe kukhaphethini iyilokhu okuhlukile kunempisi eyodwa. Indlela impisi exhuma ngayo ayisikhumbuza nje—iyenza impisi ehlukene.	I-“lone wolf” iyindlela yokuzilondoloza ngesimo sezulu. Akuyona indlela evamile yomphisi futhi akuyona into engcono kakhulu yango. Umuntu ohlala uyizodwa—okuthi ukutadila kubanga kanye nokululama okwamanje kungabangela—ngumphisi oyizodwa. I-"pack" ayiyona nje indlela yokufanekisa ukwesekwa. Kuyinto yangempela ebalulekile empilweni yomphisi. Ubuhlobo obuqinile kanye nokuxhasana akuyona into engabhekwa njengeyinkinga ekululamaneni. Yindlela umuntu ongcono kakhulu angathuthuka ngayo.

IX. I-Mycelium - iBhuluni le-Basidiomycota nezinye izinhlobo.

Umhlaba ubukeka ukuthi uqukethe izihlahla ezahlukene. Ngezansi komhlaba, i-mycelium—inethiwekhi yezintambo ezincane kakhulu zamagciwane—ixhuma amara ezihlahla eziseduze into abahlinzeki bomhlaba bayibiza ngokuthi "iwebhu elibanzi lwamahlathi." Ngale nethiwekhi, izihlahla zihlanganisa ikhaboni, ama-nitrogen, amanzi, kanye nezinkomba zakazwelonke. Isihlahla esilwa nezinduku ithumela izingxenye ezikhombisayo ezenza ukuthi izihlahla eziseduze zikhiqize izesekeli ngaphambi kokuba izinduku zifike. Isihlahla esincane esingakwazi ukukhiqiza amanzi okudlula imisebe ngokwanele, thola ikhaboni ezihlahleni ezinkulu eziphakathi komhlaba. Lapho isihlahla esikhulu sishona, singadlulisa izingxenye ezinkulu zokudla ezizungezile izihlahla eziseduze. I-mycelium ihlala ikhetha ukuthi yini ezoyidlula. izinsiza ezihloselwe amakhithi ahlanganisiwe kunokuthi aqale kuleyo enobunzima obukhulu kuya kulona enobunzima obuncane.

Imycelium yenza okulandelayo: *** Ithuthukisa ukukhula kwezinto ezibukhuni.** *** Ihlanganisa izakhamuzi kanye nezimpucuko.** *** Inikeza imithombo yokudla nezilwane.** *** Iyasiza ekuhlanzeni umoya.** *** Ingasetshenziswa kwiimikhiqizo yezokudla, ezomswakama, neyemithi.**	**Yini okufundiswa yi-Mycelium?**
Idala ingqimba yezakhiwo ebonakalayo eyenza ukuthi izinto ezibukeka zihlanganisiwe. Ithuthisa imithombo lapho kunesidingo. Thumela izaziso ngaphakathi ohlelweni ngaphambi kokuba amabhodi ngamunye athintwe. Yenza ukuthi ukuhlukaniswa okubonakalayo kwaminyuka ngayinye kube nje ukubukeka kuphela, kukhona ubudlelwane obunzulu ngaphansi kwalokho.	Umuntu osekuqaleni kokuphuzi futhi obukathisekayo akuyena odayiswa ukuthi ukhululekile. I-mycelium iyinkundla engabonakali yokuxhumana kwabantu: okuhlangenwe nakho okufanayo kokusinda, ukudluliselwa kolwazi mayelana nokuthi yini esizise, umphakathi ohambisa izinsiza ezixazulula ukuntuleko. Umuntu oya ekwesekeni abanye ngaphambi kwakhe akwenzi usizo. Ukhona njenge-mycelium. I-carbon ayadlulisa yi-nolwazi oluqinile lokuba ube kulo mthamo futhi uphume.

X. Umkhovu wase-Sandhill - Antigone canadensis

Izinkukhu zika-Sandhill zigibela ngamabhuloho ayizikhulu kuye kwezinkulungwane, ziyindiza ngefomethi ye-"V". Izinto ezifundisiwe: inyoni ngayinye iyindiza kancane ngaphandle kwenyonini engaphambili, ifakwe ekuthwetshukwini okuvela kumagxenge enkinga yenyonini eholayo, ithola ukukhuliswa okunciphisa izindleko zamandla zokundiza kuku-25%. Ubuholi buguquka — lapho inyoni eholayo iqeda amandla, iyawa futhi enye ithatha indawo. Ukuguquka akuhlelweni ngamabangela obubanzi, kodwa ngokwamanani ayo yamanje: inkukhu ekukhulu kakhulu ukuba ibe nomholi manje iyoba nomholi. Ukugibela akunampumelelo uma inyoni ngayinye igibela yedwa. Kunqedwa yi... ukulungiswa.

Yini okwenza umkhovu waseSandhill?	**Okunye okufundiswa yinhlanzi yaseSandhill:** *** Ukubaluleka kokuxhumana.** *** Ubuhle bokuzindla.** *** Inhlanzeko yendlela yokuhlala.** *** Amanani okwazisa.** *** Izindlela zokukhuthaza ukukhula.**
Uhamba ngohlela obuyekezwayo wobufakazi. Ukhiqiza ukuthuthuka kulabo abangemuva kanti uthola ukuthuthuka kulabo abaphambili. Uhlela ubuholi ngokusekelwe ekukhonzeni kwamanje kunokungaba yisikhulu esiqobo. Uqedela uhambo olungeke lwenziwe umuntu ngamunye yedwa.	Uhambo lokululama kungumkhuba wezinkukhu. Kwakhona kulo mkhuba, umuntu angathola usizo oluvela kulwazi labanye abantu. Kwakhona, umuntu angaguquka futhi abe yinkuku ebusongweni—ahlinzeke ngolwazi oluthile mayelana nalokho okunye abantu obalindele ukuthi bayibuze okokuqala. Inkukhu ebusongweni ayiyona inkukhu enkazana kakhulu. Yinkukwa eyisikhathi esetshenziselwe ukufaneleka kwalesi simo. Umuntu owedlule kulokho omunye umuntu obhekene nakho uyinkukwengempela yaleli nkinga ngaleso sikhathi. Akuyona usizo olukhulu. Akuyona uhlelo lokuhlela. Ukusiza ngokubambisana.

Isigaba 4 — Uhlelo Lokufunda Ngemvelo.

I-CENTURION - Amadosi ezinto zemvelo ziyimikhiqizo yezokwelapha. Idokhumentiwe, hhayi ukubonakala nje.

Ukuchitha isikhathi emihlaba yangempela kunciphisa i-cortisol, kunciphise ukucabanga okungapheli kwe-"default mode network", kubuyisele ekubaleni okulandelwayo, kwandise i-BDNF, futhi kudale uthando oluqhubeka ngemva kokuchitha lesikhathi. Lezi ziyishintsho efinyelekayo ezengqondo, hhayi imiphumela yokuba nje endaweni enhle.

Ijubile.	Lokhu kusebenza kanjani?	Ukuzijwayeza.	Ukuxhumana.
10–20 min.	I-cortisoli iqala ukwehla. Ukusebenza kwe-amygdala lunciphile. Ukucabanga okungapheli luyiwe. Impendulo yokugcwaliseka kokuxazululwa kokuphazamisekayo iqala ukuphulukiswa.	Hlala ngaphandle endaweni yendalo. Ungasebenzisi ifoni. Ungenzi msebenzi. Buka okubona phambi kwakho. Faka izinto ozibonayo ngamagama, ungazilingisi.	Idosi yokuqala. Itholakala kuzo zonke izigaba zokululama. Qala lapha.
20–60 min.	Ukuthuthuka okuqhubekayo kwesimo sengqondo. Umsebenzi wephrofalamu uguquka kusukela kumkhuba wokucabanga ngalezo zinto ezidlulele ekubhekaneni nezinto zamanamanje. Izimpawu zokudala zithuthuka.	Hamba ngaphandle kwendawo ongiyiyo. Bheka izinto ezimpilako —izitshalo, izinyoni, izinambuzane, imoya, amanzi. Le ndlela yokuphimisela ukunembatha, hhayi umsebenzi. Ukuhamba kuyindlela nje. Ukubuka kubalulekile kakhulu.	Idosi elincane elifanelekele ukubuyisela amandla okucinga. Izikhathi ezintathu noma ezine ngesonto.
90–120 min.	Ukubuyiselwa okuphelele kwenguqulela eceliwe. Ukwanda okubonakalayo kwe-BDNF. Ukuncishiswa kokuqala ngokwakho. Umuzwa wokubukeka ezinto eziningi.	Indawo yendalo ethile ebuyiselwa njalo. Umzila ofanayo, amanzi afanayo, umuthi ofanayo. Ukwazi okujulile kwenza ubuhlobo buqiniseke — uqala ukuqaphela ukuthi uthi ngabe uyibonile yini ngenye indlela ngokuqala.	Idosi esivumela ukufundwa kwezilwane. Akwenzeka ukuthi ufunde ngobungane obuncane (dragonfly nymph) emizuzwini eyishumi kuphela. Amahora amabili efanayo endleleni efanayo yenza

			lokho kungenzeka.
Masonto onke, ngokuqhube kayo.	Ukunciphiswa kwezinkinga zokukhathazeka, ukuthuthuka ekulawulweni kwemizwa, kanye nokuba ngumuntu okhoma emhlabeni ongokwemvelo kungekhona nje ukuyovakashela.	Indawo eyodwa endleleni, eduze futhi kufinyelelwe kalula, lapho uyovela njalo. Ngamathanga ahlukene. Ngezimo zemvelo ezihlukahlukene. Vumela le ndawo ukuthi ikufundise lokho okufundisa ngokuhamba kwesikhathi.	Ubumbano wezakhiwo ende. Akuyona umsebenzi. Kuyinto ubuhlobo.

Ukuzimisela ngomzimba.

Izinhlobo zizidalwa azona izindlela ezifushane ezisetshenziselwa ukufundisa kanye nokugxeka. Yizindlela okumele uziphile.

1. Khetha ilwandle elilodwa elibonakalisa ukuthi yikuphi okusekhona. Akuyona into oyithakaselayo, kodwa leyo eqondile kakhulu ngesimo lakho manje.
2. Learn it specifically — not from this guide alone. From naturalist literature, documentary footage, field observation if possible. The more specific the knowledge, the more powerful the embodiment.
3. Bheka ngayo endleleni uma kungenzeka. Funda ngomuntu uyodlula—indlu ayithanda ukuhlala kuyo, ubuhlobo bakhe nabanye. Izilwane ezidumele zifundisa kakhulu kunamahlakazana esihloboneni.
4. Ngingakwazi ukukusiza ngalokho uma unginikeza imininingwane mayelana nalesi silwandle kanye nalokho ongikushoyo.
5. Buyela kule ndlela yokubonakala yaleli nsimbi ngemva kwamahora angu-30, amahora angama-60, kanye namahora angu-90. Ubuhlobo bakho naleli nsimbi kuzoshintsha njengoba isimo sakho kushintsha. Uhlobo olunzayo lwesimbi lungaba ngcono kuleli zisikhathi ezahlukene.

Isigaba 5 — I-Chrysalis njengendawo yokufakelwa.

I-CENTURION - Ukulwela ukukhula kuyakha amandla engxenye eyenza ukundiza kube nokwenzeka.

Umuntu uthola uphaphu futhi, ebuka intuthu izama ukaphuma, uyayivula ukuze iyisize. Intuthu iphuma kalula—kodwa iyashona, amabhokwe ayo alimele kakhulu kangangokuthi awasebenzi. Ukulwela phansi kwephaphu kuyaletha umdabu ezweni lamabhokwe. Ngaphandle kolwelo, amabhokwe awenziwa kahle. Intuthu esizwe ayikwazi ukundiza.

I-chrysalis iyikhithi, hhayi umugqomelo. Ivikela inqubo ekuhlazulisweni ngaphandle ngoba ukuhlazuliswa—ngisho nalokho okuhloswe kukona—kuyaletha imiphumela engahleliwe.

Yini efihliwe ngaphakathi kwe-chrysalis?	Yini okukhipha lapho uyisuka khona?	Yini okukhiqizwayo uma kuqedwa ukukhuliswa?
Inqubo yokuhlazwa. Ukuhlehliswa kabusha kwezinto ezihlaziwe. Umzamo wokuvuthwa. Konke ngaphakathi kwendawo eqediwe, endaweni esingcwele, engatholeki ukungenelela ngaphandle.	Ibhambatha elingakwazi ukundiza. Ukusindiswa okubonakala kungenxa yothando kuhlanganisa nokulahlekelwa kwakhono lokushintsha amaphiko. Ibhambatha esindisiwe ayikwazi kangako, hhayi nakungcono.	Inja enezingxenye zayo ezikhuliswe ngokuphelele. Uhambo lwenja yaseMonarch eya ezinkhalameni zaseMexico. Ukubonakala okuphelele kwe-blueprint yama-imaginal discs. Amandla amanga akhiqizwa ukulwela.

Isikhathi sokululama esizwa sengokuthi uyagxilwe—uhlelo lwamahora ngamhora, ukulungiswa kwezimali okubonisa ukuthi akukho lutho olungatholakali kulolu hlu olubalulekile, ukuphothula kabanzi kwengqondo, ubuhlungu obunzima kunalokho okuhlosiwe—nguyindlebe. Akuyona indawo engalungile. Yindawo efanele yalo msebenzi okhulu ohamba ngaphakathi kwayo.

Isigaba 6 - Ukuvela.

I-CENTURION - Awubuyeli kulowo wesifazane ongakhona. Le ndlovukazi isusiwe. Okuthile okunye kusungulwa.

I-bhambatha ayiqhubeki lapho intokotiyo eyishiye khona. Ihlala ezweni elihlukile ngamakhono ahlukene, futhi ingasetshenziselwa izinto ezahlukene. Kuyinto eqinisekiswayo ukuthi ihlobene ne-intokotiyo—impendulo efundisiwe ye-hawk moth iqhubeka—kodwa indlela yayo iyahluka kakhulu.

Ukubuyela emuva ekuhlelweni kuyindlela efanayo yokuguquka. Umuntu ovela kulo hlelo lonke akuyi ukuthi uyonakekelwa, kodwa uyinto ehlukile. Izicubu zokwakhe ezilandelwe yintando yangakwenzeka ngaphandle kokuhlaziywa.

Izimpawu Zokuvuka.

Marker	Kungabonakala kanjani?	I-mhlabathi efanayo.
I-shell ayifani manje.	Ubuchule obugcine umuntu ehlwini lokuziphatha luyashoniswa njengento esondele ukuba yinto edumile. Amanani ayo akhokhelayo manje asengamanani awo ahlela impilo. Phakathi kwezikhwama, okubonakalisiwe ngokushesha, umuntu ufuna ngobuqotho isikhwama elifanele ubukhulu bakho njengamanje.	I-crab yaselwandle endaweni yokutshintshanisa izikhwama. Ukuba khona kwezinkinga ngesikhwama esishintshwayo kuyizimpikiselo zokukhula. Isikhwama esishiye sitholakala kumuntu odinga lokho okuyinto ukukhulu kakhulu.
Ngezi ndlela zokuhamba ezivela kumhlahlandlela wangaphakathi.	Izinqumo akusona ukuthi ziqhutshwa ngokuphuma kwengcindezi yangaphandle, ngokufuna ukuthembeka, noma ekulawuliseni izimpendulo zabanye. Inkambiso manje iyakhulu kakhulu - amagugu, ulwazi lwendlela umuntu esakhiwe ngayo (genomic self-knowledge), uhlelo lwansuku zonke olwenziwe kulomuntu ngqo.	I-Monarch ihamba ngokuya ilanga kanye nomkhakha wokumiswa, iya endaweni ayikaze yiyo. Uhlelo lokuholisa luyingxenye yayo. Indawo okufinyelelwe kuyo iyaziwa ngaphambi kokufinyelela kuyo.
Amandla okuthola nokunika usizo.	Akukho ukunikeza kuphela, futhi akukho ukuthola kuphela. Ekuhleleni—nikela ngokusiza kulabo abangemuva, thola	I-Sandhill Crane formation. Ukuguqulwa okususelwe ekubekeni kwamanje. Ukunyuka ngokuhlanganyela

	usizo kulabo abangaphambili, futhi vundisa kuze kube yilapho ulwazi oludingekayo lufinyelelwa.	kokuhamba.
Imipho ivele.	Umenyezelo obungenziwe—uhlinzekwa ngaphandle kwesimo esidingekayo, kusukela ekunethembekeni okukhulu kunokuba yinto edingeka ukuyenza. Lesi sipho sivela ngokwemvelo ngenxa yokuziphilisa kunokuba ngenxa kwezinto ezenziwe ukuze kulungiswe.	Izipho zeCrow—ukuhamba. Ukuthuthwa kwe-Mycelium okuyisikhathi esithile kuya kumuthi onobunzima. Umzimba weSilimela okhokhela umhlaba wonke. Ingxenye enezingqungquthelo evela enhleboneni yangempilo yangempela.

Incwadi Kubalimi Bezincwadi Zombuso.

Ngiyazi kahle imithetho. Ngizoya ngilandelana nayo ngokungathathi hlangothi futhi ngihloniphe yonke imininingwane efakiwe. Ngingazicabangi, ngingahlanza, futhi ngigcine nje nokukhipha ukuhumusha okucophelele kanye nalokho kuphela.

KUMLINGISI WEZINCINGO.

Yini okwakwazi ukuyenza ngaso, kodwa ingabukhiwe yileli kakhulukazi le-caterpillar?

Yini ongaziwayo manje okungakaze kwaziwe umuntu oqale ukuba nesifo senhliziyo?

Yini eyahlaziywa futhi yini eyibonise?

Lolu hlobo yezilwane oluchaza ukuthi ukhona kuphi manje ekuhambeni lokukhula?

Yini okudingeka ukuthi uyenze njengoba intukutana—uhlobo oluhleliwe walokho okuyahlaziywa—iqeda ukwakha yona?

Ama-diski omfanekiso awadingi ukuthi kukhuthazwe. Kudinga izimo ezilandelayo: okufakiwe kufanele kube luhleliwe, ikhristalisi kufanele ibe yinto ebulalelayo, isikhathi esifanele kufanele kunikezwe, futhi umzabalazo awenziwa ngokushesha.

I-Chrysalis - Ukuphela.

I-CENTURION - Umhlaba ugcwele izidalwa ezixazululele okufanele ukuthi uyixazulule wena. Yiya uzifunde.

I-Monarch ihamba endaweni ayikaze yiyo.
Impuliphansi ye-Dragonfly ebuthini, eyenza ukwazi ukuphakama.
Isilwane esikhulu se-Salmon sibuyela lapho saqala khona, simele olunye ulwandle.
I-Cicada ilinde ngobuchule obuqinile.
I-Hermit Crab yamukela ubungozi bokushintsha kweshel.
I-Lotus ikhula ebuthinini ethize, iqala ukukhanya.
Impungushe yenza izipho futhi igcine imfihlo.
Inja iyaziwa ngokugcwele kwiqembu layo.
I-Mycelium yakha isakhiwo esibonakalayo sokuxhumana.
I-Sandhill Crane idala futhi ithola ukukhuthazwa okuhlangene.

Lawawoyena izinto ezihlobisa inqubo yokululama. Yilemininingwane evela endaweni efanayo. Izidalwa lezi zixazulule izinkinga ezithize zokuhlazwa, ukukhula, ukuzulazula ngaphandle komhlahlandlela, ubungozi bokukhula, kanye nesidingo lomphakathi—zizixazulule kulezo zinkinga ubuqembu obungamakhulu eminyaka, ngezindlela ezifana nalokho okubonakala emisipha yazo. Yilezi izidalwa ezazi ukwenza lokhu okufundiswa kulolu bhali.

Phuma ngaphandle. Thola enye yazo. Buka ukuthi iyenza kanjani okuyadingeka ukuba yenze. Buza ukuthi uyazi yini ngalokho oyenzayo.

I-caterpillar iyahlaziywa. Amadiski e-imaginal ahlehliselwa. I-bhathiphayi yomile amaphiko ayo. Ukulwela okugcwalisa amaphiko ngempilo kuyindlela yokulwela eyenza ukundiza. Futhi ukundiza—lapho kudingeka—kuya kude kunalokho i-caterpillar elingahamba.

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